

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group
Art Unit: Unknown

Attorney
Docket No.: SHC0144

Applicant: Satoru Tange

Invention: PROCESS FOR MANUFACTURING
ELASTICALLY STRETCHABLE AND
CONTRACTIBLE COMPOSITE SHEET

Serial No: Unknown

Filed: Herewith

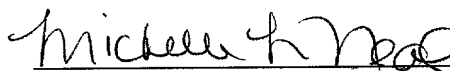
Examiner: Unknown

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on August 31, 2001


Michelle L. Neal

PRELIMINARY AMENDMENT

Box Patent Application
Assistant Commissioner for Patents
Washington, DC 20231

Sir:

Prior to the examination of the above-identified application, please amend the
application as follows:

IN THE CLAIMS

Please amend Claim 1 as follows:

1. (Amended) A process for manufacturing a composite sheet capable of elastic stretch
and contract in one direction, said process comprising:

(a) continuously feeding, in the one direction, a first web capable of elastic stretch and
contraction and having a top surface and a bottom surface;

(b) extending said first web in the one direction within [the] a range that permits elastic
stretch and contraction of the first web;

(c) continuously feeding a second web capable of inelastic extension and composed of

thermoplastic fibers along the one direction;

(d) superimposing said second web on at least one surface of the extended first web and joining said second web to the first web in an intermittent manner along the one direction to provide a composite web;

(e) extending the composite web in the one direction within a range that permits elastic stretch and contraction of the first web; and

(f) allowing the extended composite web to retract by an elastic contraction force of the first web to thereby obtain said composite sheet.

Please amend Claim 2 as follows:

2. (Amended) The process of Claim 1, wherein said thermoplastic synthetic fibers of the second web are engaged with each other by mechanical entanglement or fusion bonding and, in the step (e), the thermoplastic synthetic fibers are partly freed from the engagement to the extent that they are individualized.

Please amend Claim 3 as follows:

3. (Amended) The process of Claim 1, wherein two second webs are provided with one second web joined to top surface of the first web and another second web joined to the bottom surface of the first web, and the second webs respectively joined to the top and bottom surfaces of the first web being distinguished from each other by at least one property selected from the group consisting of basis weight, density, type of the thermoplastic synthetic resin, diameter, and length of the fibers thereof.

Please amend Claim 4 as follows:

4. (Amended) The process of Claims 1, wherein said first web comprises at least one of an elastically stretchable fabric composed of thermoplastic synthetic fibers and an elastically stretchable film made of a thermoplastic synthetic resin.

Please amend Claim 5 as follows:

5. (Amended) The process of Claim 1, wherein said thermoplastic synthetic fibers in the second web comprise continuous fibers.

IN THE ABSTRACT

Please amend the abstract as follows:

- -A process for manufacturing a composite sheet by joining a second web made of thermoplastic synthetic fiber and capable of inelastic extension to at least one surface of a first web capable of elastic stretch and contraction in an intermittent manner. The process includes a step of extending the first web, a step of joining the second web to the extended first web and a step of extending the joined first and second webs.- -

• • • R E M A R K S • • •

By the present Preliminary Amendment, the claims and abstract have been revised to more clearly describe applicants' invention in accordance with the requirements of 35 U.S.C. § 112.

Care has been taken so as to avoid the addition of new matter in the specification and claims.

Entry of the present Preliminary Amendment prior to the examination of the application is respectfully requested.

In the event applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, applicants hereby petition therefor and authorize that any charges be made to Deposit Account No. 02-0385, Baker & Daniels.

Respectfully submitted,



Michael S. Gzybowski
Reg. No. 32,816
BAKER & DANIELS
111 East Wayne Street
Suite 800
Fort Wayne, Indiana 46802
(219) 460-1661

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Changes Made to Claims

Claim 1 has been amended as follows:

1. (Amended) A process for manufacturing a composite sheet capable of elastic stretch and contract in one direction, said process comprising: [by continuously feeding, in the one direction, a first web capable of elastic stretch and contraction and having a top surface and a bottom surface, continuously feeding a second web capable of inelastic extension and composed of thermoplastic fibers on at least one surface of the first web and joining the first and second webs in an intermittent manner along the one direction;

said manufacturing process including the following steps:]

(a) continuously feeding, in the one direction, a first web capable of elastic stretch and contraction and having a top surface and a bottom surface:

(b) [(a) a first extension step wherein] extending said first web [is continuously fed in the one direction and extended] in the one direction within [the] a range that permits elastic stretch and contraction of the first web;

(c) continuously feeding a second web capable of inelastic extension and composed of thermoplastic fibers along the one direction:

(d) [(b) a step wherein] superimposing said second web [is superimposed] on at least one surface of the extended first web and [joined] joining said second web to the first web in an intermittent manner along the one direction to provide a composite web;

(e) [(c) a second extension step wherein] extending the composite web [is extended] in the one direction within [the] a range that permits elastic stretch and contraction of the first web;
and

(f) [(d) a step wherein, after the second extension step,] allowing the extended composite web [is allowed] to retract by an elastic contraction force of the first web to thereby obtain said composite sheet.

Claim 2 has been amended as follows:

2. (Amended) The process of Claim 1, wherein said thermoplastic synthetic fibers [in] of the second web are engaged with each other by mechanical entanglement or fusion [bond] bonding and, in the step [(c),] (e), the thermoplastic synthetic fibers are partly freed from the engagement to the extent that they are individualized.

Claim 3 has been amended as follows:

3. (Amended) The process of Claim 1, wherein [the] two second webs are provided with one second web [is] joined to top surface of the first web and another second web joined to the [and] bottom [surfaces] surface of the first web, and the second webs respectively joined to the top and bottom surfaces of the first web [are] being distinguished from each other [in any of properties,] by at least one property selected from the group consisting of [including a] basis weight, [and] density, [of the second web, a] type of the thermoplastic synthetic resin, [and a] diameter, and length of the [fibers.] fibers thereof.

Claim 4 has been amended as follows:

4. (Amended) The process of Claims 1, wherein said first web [is either in the form] comprises at least one of an elastically stretchable [non-woven or woven] fabric composed of thermoplastic synthetic fibers [or] and [in the form of] an elastically stretchable film made of a thermoplastic synthetic resin.

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